

Notice of Allowability

Application No.

10/584,645

Examiner

Nancy Bitar

Applicant(s)

BLONDE ET AL.

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 6/26/2006.
2. ☒ The allowed claim(s) is/are 1-4, 6 and 7.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of
- Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>01072008</u> . |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date <u>01072008</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Jeffrey Navon on 01/07/2007.

The application has been amended as follows:

Please cancel claim 5

2. The following is an examiner's statement of reasons for allowance: While Carlbom et al. (6, 141041) teaches tracking moving objects in real time whereby trajectories corresponding to the movement of the objects are determined. More particularly, the present invention relates to a method and apparatus for tracking moving objects, such as athletes, in connection with sporting events and exploiting such tracking to derive information corresponding to the movement of the objects being tracked. Robert et al (5,214,751) teaches time interpolation of images, for determining an interpolated luminance value for each pixel of an image (T_j) called image to be interpolated, on the basis of the luminance values of the pixels of a first and of a second image called known images (T_a , T_b) taken at instants T_a and T_b respectively, T_j lying between T_a and T_b , consisting in; associating the values of the components of a speed vector with each pixel (H) of the image to be interpolated (T_j) called pixel to be interpolated; determining, in the two known images (T_a , T_b) the coordinates of two points (A , B) called base points of the time interpolation, each of these two point corresponding to the centre (F_j) of the pixel to be

interpolated (H), by a translation in the plane of one of the known images (Ta, Tb) a translation whose vector is a function of the product obtained by the multiplication of the speed vector associated with the pixel to be interpolated (H) with respectively the durations $T_j - T_a$ and $T_b - T_j$; determining the luminance value of each of the two base points (A, B) by a spatial interpolation between pixels adjacent to each of these base points (A, B) respectively in the two known images (Ta, Tb).None teaches determining the displacement of a pixel between a first and a second image enabling the computation module to be simplified wherein a projection operation on the object of the second scene of a third image constituted by a set of pixels, in which the color of each pixel indicates its position in this third image, this third image being projected from a projector whose position relative to the object that it illuminates in the second scene is selected to be the same as the relative position of the viewpoint in relation to this object in the first scene, an operation for modifying the surface appearance of the object lit in such a manner that the surface of this object diffuses the lighting of the projector towards the viewpoint, and an operation for removing any spurious light sources capable of modifying the color diffused by one or more points of the object, and also comprising after the synthesis of the second image from the second scene in which the color of at least one point of the object was defined during the definition step, for this or that point of the object: an operation for identifying the position and the color of a pixel of the second image corresponding to this point, an operation for deducing the position of the object in the first image from the color identified, and an operation for determining the displacement of this pixel from the position identified in the second image and from the position deduced from the pixel color. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should

preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nancy Bitar whose telephone number is 571-270-1041. The examiner can normally be reached on Mon-Fri (7:30a.m. to 5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on 571-272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nancy Bitar

1/7/2008


SAMIR AHMED
SUPERVISORY PATENT EXAMINER